CHAPTER 4

ENVIRONMENTAL

4.1 Determination of NEPA Classification

In compliance with **National Environmental Protection Act (NEPA),** all proposed projects must be assigned an Environmental Category designation of Major, Intermediate, or Minor. The appropriate level of environmental studies and public involvement activities required for location approval is as follows:

- Major - Draft and Final Environmental Impact Statements (EIS) are prepared for the project. The result of the Final Environmental Impact Statement is identification of the preferred project alternative that is approved by FHWA in a Record of Decision.
- Intermediate - An Environmental Assessment (EA) is prepared.
- Minor – A Categorical Exclusion Determination is prepared for the project. The Categorical Exclusion Determination documents the environmental clearances and permits required completion of the project.

Environmental documents for Major and Intermediate projects are either prepared by the TPPA or by a qualified consultant under the direction of the Project Manager. To determine the initial category designation and the environmental clearance requirements, the Environmental Coordinator will consult with the TPPA, other District and staff disciplines, FHWA, resource protection agencies, and the public.

NOTE: The Environmental Coordinator's first opportunity to review a project is when design funds have been obligated.

The Program Manager schedules and coordinates with the TPPA to obtain the appropriate studies, clearances, and permits for the project. If a consultant is utilized for project development work, the Project Manager also coordinates appropriate work with the consultant. Close coordination between the TPPA and the Project Manager in the project development process is essential to avoid and minimize impacts to the environment.

The Program Manager also works with the TPPA and designers (such as the Project Manager, the consulting Geotechnical Engineer, consulting Hydraulics Engineer, and bridge design) to develop mitigation measures for impacts to the environment that cannot be avoided. The Project Manager is responsible for notifying the TPPA of any changes in design scope that may affect the level of environmental clearances required for a project.

The Project Manager is responsible for coordinating and maintaining all documentation on the National Environmental Policy Act process in accordance with **23 CFR Part 771** for any category of action.

The Program Manager obtains clearance letters and documents from the resource agencies to include in the project file. Environmental commitments, required because of these clearances and permits, are coordinated with the Project Manager for appropriate coverage in the project plans. Additional documents shall be prepared for Categorical Exclusions as per request from FHWA.

As project design proceeds, the TPPA should coordinate directly with the Project Manager to ensure mitigation commitments made during the project development process are included in the plans and completed in the field during construction. The Project Manager, when completing preliminary and final design for Major and Intermediate projects, is responsible for ensuring the scope of work and project limits do not exceed the scope and limits as described and analyzed in the approved environmental documents (Environmental Impact Statement, the Record of Decision, the Environmental Assessment and the Finding of No Significant Impact).

Changes outside the scope of the approved environmental clearances for the project will require new environmental clearances. The Project Manager is responsible for coordinating directly with the TPPA regarding all changes to the scope or project limits so that appropriate environmental clearances can be obtained. It is the responsibility of the Project Manager to include the TPPA in the design scoping process for all projects.

4.2 Section 4(f)/Section 6(f)

Generally, the District (on minor impacts) employs the Nationwide Programmatic 4(f) in their projects and this process is incorporated to the EA; on major impacts use the following 4(f) process.

4.2.1 Individual Section 4(f) Evaluations

To avoid unnecessary issues in reference to the Section 4(f) evaluation, the following areas should be completely documented:

- The applicability/non-applicability of Section 4(f)
- The coordination efforts with the official(s) having jurisdiction over or administering the land (relative to the significance of the land, primary use of the land, mitigation measures, etc.)
- The location and design alternatives that would avoid or minimize harm to the Section 4(f) land
- All measures to minimize harm, such as design and landscaping

4.2.2 Individual Section 4(f) Evaluation Format and Approval

The Section 4(f) evaluation may be incorporated as an element of an Environmental Assessment/Finding of No Significant Impact or Environmental Impact Statement. However, the Section 4(f) evaluation must be presented in a separate section. All Section 4(f) evaluations are reviewed at the District office. If the Section 4(f) evaluation is contained in an Environmental Impact Statement, the District will make the Section 4(f) approval either in its approval of the final Environmental Impact Statement or in the Record of Decision. In those cases where the Section 4(f) approval is made in the final Environmental Impact Statement, the basis for the Section 4(f) approval will be summarized in the Record of Decision.

The formal documentation to evaluate impacts to Section 4(f) and 6(f) lands is included in the design work controlled by the Project Manager. Under certain circumstances, an abbreviated 4(f) document may be prepared if the project impacts meet the eligibility criteria for use of one of four nationwide programmatic 4(f) evaluations, but again, this information is usually included in the design work. All 4(f) evaluations must be approved by the FHWA before projects receive route location approval and advance to construction.

A 6(f) evaluation is required when such lands are used for a proposed transportation project. Approval of the Department of Interior is required before 6(f) lands are used for a transportation project. Identifying 6(f) lands can require extensive coordination and research. It is the responsibility of the FHWA to certify that there are no prudent and feasible alternatives to the use of 4(f) lands and that DDOT's project includes all reasonable measures to minimize harm.

4.3 Section 106 - Historic Clearances

The State Historic Preservation Office (SHPO) is responsible for assuring that the provisions of the National Historic Preservation Act (16 USC 106,470) are complied with prior to FHWA approving and funding DDOT construction and maintenance activities. Historic survey documentation and SHPO consultation are required for Categorical Exclusions, Environmental Assessments, and Environmental Impact Statements that have the potential to impact historic properties.

The **Section 106** process requires the identification of historic sites, structures and objects, and an assessment of potential effects to their integrity. The SHPO and the Environmental Coordinator is responsible in coordination with the Project Manager to determine impacts of proposed projects on historic resources, developing mitigation measures, coordinating interagency reviews, and

concurrence. The Environmental Coordinator is responsible for processing the required documentation through the SHPO, the FHWA, and the Advisory Council on Historic Preservation, the Federal agency mandated to uphold **Section 106.** NOTE: The Environmental Coordinator consults with the SHPO, the FHWA, and the Advisory Council on Historic Preservation, upon request by the Project Manager.

4.4 Historic Bridges

When proposed construction projects involve bridges that have been determined eligible for or listed on the National Registers of Historic Places, the Environmental Coordinator coordinates with the SHPO and develops mitigation strategies to avoid or minimize negative impacts to historic bridges.

The FHWA is responsible for assuring that the provisions of **Section 106** of the National Historic Preservation Act are complied with prior to providing funding and approval for construction projects. The Environmental Coordinator is also responsible for assuring that the provisions of the National Historic Preservation Act are complied with prior to funding and approval.

Following the determination that a bridge is historic, an assessment of potential effects and formal interagency review and consultation must occur with the SHPO. To preserve and enhance the District's historic bridges, the following is required:

- Coordination between DDOT and the SHPO.
- A letter from the Environmental Coordinator to the SHPO describing the effects that the project will have on the historic bridge, to include proposed mitigation measures for resolving the use of the bridge plans developed in coordination with the Program Manager.
- If required, a memorandum of agreement prepared and coordinated among the SHPO, the FHWA, and the Advisory Council on Historic Preservation. If the bridge is to be replaced and is of a structural type that can be moved to another location, the historic bridge must be offered for adoption.
- If a historic bridge must be reconstructed or rehabilitated, a Programmatic Section 4(f) evaluation also must be developed. The 4(f) evaluation, if necessary, is completed by the Environmental Coordinator with information and data provided by the Program Manager.

When historic bridges are rehabilitated, a Historic Structure Report is required as well; this report shall be prepared by the Consultant. This document provides the basis for the conclusions in the **Section 106** determination.

NOTE: There are currently six bridges in the District listed individually in the National Register of Historic Bridges. The following is a current list of all Historic Bridges in the District:

- Bridges on the National Register of Historic Places

  Wisconsin Avenue Bridge over C&O Canal [Bridge No. 2]
  Francis Scott Key Bridge over Potomac River [Bridge No. 7]
  Connecticut Avenue [Taft Memorial] Bridge over Rock Creek Park [Bridge No. 30]
  Calvert Street [Duke Ellington Memorial] Bridge over Rock Creek Park [Bridge No. 29]
  Q Street Bridge over Rock Creek [Bridge No. 117]
  Memorial Bridge over Potomac River [National Park Service]

- Bridges of Local Historic Interest

  Chain Bridge over Potomac River [Bridge No. 1]
  Park Road Bridge over Rock Creek [Bridge No. 20]
  (Near historic Pierce Mill)
  16th Street Bridge over Piney Branch Parkway [Bridge No. 22]
  Connecticut Avenue Bridge over Klingle Valley [Bridge No. 27]
  P Street Bridge over Rock Creek [Bridge No. 34]
  M Street Bridge over Rock Creek [Bridge No. 35]
  Pennsylvania Avenue Bridge over Rock Creek [Bridge No. 118]

4.5 Archaeology

When a transportation project area contains significant archaeological resources, avoidance must be considered as a primary alternative. If avoidance is not feasible, then a data recovery excavation or other method to mitigate adverse effects may be implemented.

Prior to ground disturbance activities associated with any District or federally funded construction project or maintenance activities and/or designated materials source, an archaeological resources inventory must be conducted to identify, record, and evaluate historic and prehistoric sites within the proposed area of impact. The Project Manager in conjunction with the Environmental Coordinator is responsible for undertaking the field survey, initiating a literature search through the Historical Society, and coordinating with the SHPO, the FHWA, the Advisory Council on Historic Preservation, and other land-managing agencies as appropriate. DDOT may request technical assistance from the Office of Planning, Historic Preservation Division.

A management plan for all significant archaeological localities is developed by the consulting Archaeologist. A report documenting the results of each project inventory is completed and submitted to the Historical Society, the Environmental Coordinator, and pertinent Federal agencies. The Environmental Coordinator coordinates this review and obtains final clearances before the project is advertised.

The consulting Archaeologist is responsible for the following documentation:

- Completing the analysis of artifacts.
- Describing the culture and importance of the artifacts.
- Developing the mitigation plan in coordination with the Project Manager.
- Preparing the final survey report.
- Consulting with Native American tribes, as appropriate, as mandated by Federal statute, and including tribal representatives in the project planning process.

The Environmental Assessment or Environmental Impact Statement prepared for the project should contain discussions describing the resources and potential impacts of each alternative.

NOTE: If archaeological resources are encountered during design investigation or excavation, any activities disturbing the site will be halted. The consulting Archaeologist will be responsible for evaluating the material in conjunction with Native American representatives, if necessary. Any activities disturbing the site must not resume until directed by the consulting Archaeologist.

4.6 Paleontology

DDOT construction projects and maintenance activities must be evaluated to determine if paleontological resources will be impacted. The Project Manager in conjunction with the Environmental Coordinator is responsible for initiating and conducting a field survey and literature search of the project area and/or pits, determining presence of paleontological resources, developing reports, and coordinating with the FHWA and the Historic Preservation Officer. DDOT may request technical assistance from the Office of Planning, Historic Preservation Division. The Project Manager in conjunction with the Environmental Coordinator coordinates these items for review and for final clearances before the project is awarded.

The consulting Paleontologist is responsible for the following documentation:

- Preparation of paleontological resource assessment report.
- Preparation of the mitigation plan in cooperation with the Project Manager and the Environmental Coordinator (may not be required for all projects).
- The following procedure is used to conduct a paleontological resource evaluation:
  - Perform literature search and field survey
  - Determine the presence or absence of paleontological resources
  - Conduct analysis to determine the scientific significance (research and/or educational value) of the resource
  - Determine if there is any potential for additional resources
  - Write the paleontological assessment report

- Develop mitigation plan in cooperation with the Project Manager (if required)
- Coordinate with FHWA and the SHPO (if required)

- Include discussion describing the resources and impacts that each alternative will have in the Environmental Assessment or Environmental Impact Statement.

4.7 Flood Plains

Designers of projects are encouraged to prevent uneconomic, hazardous, or unnecessary use and development of the floodplains. The designers should minimize intrusion of the highway into the floodplain. Any subsequent development within the ROW must follow Federal Emergency Management Association regulations. When practical, longitudinal and significant encroachments of the highway into the floodplain should be avoided.

The consulting Hydraulic Engineer is responsible for all hydraulic requirements and factors affecting the floodplains, Assessing the impacts of the highway on floodplains and mitigation of such impacts, and comparing alternate routes and significant encroachments of each alternate into floodplains. Public involvement should be encouraged to provide the opportunity for review and comments on these encroachments.

The consulting Hydraulic Engineer shall provide a complete written assessment to the Project Manager. Route location studies will include an evaluation and discussion of the practicability of alternatives. The following hydraulic engineering and environmental analysis will be undertaken for the development and modification of the floodplains:

- Determine all hydraulic and hydrological factors affecting the floodplains by the proposed action.
- Consider, evaluate, and use all available information to avoid any adverse hydraulic impact on the floodplain boundary of established water surface profiles.
- Assess the impacts, both beneficial and adverse, and determine mitigating actions of adverse impacts.
- Compare alternative routes; determine significant encroachments.
- Take steps to preserve the natural and historical floodplain characteristics that might be affected by the project.
- Summarize the hydraulic studies of different route alternatives in the draft Environmental Impact Statement or Environmental Assessment.
- Complete the written assessment and submit it to the Environmental Group office.

4.8 Section 404 Permit

A Section 404 Permit is required whenever construction projects or maintenance activities requiring dredging or filling occurs below the ordinary high-water line in any body of water, considered a body of water of the United States (navigable waters of the United States and adjacent wetlands; all tributaries to navigable waters and adjacent wetlands; interstate waters and their tributaries and adjacent wetlands; and other waters of the United States such as isolated wetlands and lakes, intermittent streams, and prairie potholes).

Project Manager is responsible for preparing and submitting the Section 404 Permit applications in coordination with the Corps of Engineers. The Project Manager will transmit the permit application and any permit regulations required by the Corps of Engineers to affected District offices. Maintenance activities are also regulated.

Permits are obtained from the U.S. Army Corps of Engineers. There are three levels of permits, generally based on the amount and type of impact:

- Individual Permit - A Corps of Engineers authorization that is issued following a case-by-case evaluation of a specific project involving the proposed discharge and a determination that the proposed discharge is in the public interest. The greater the wetland impacts on a project, the more likely that an Individual Permit will be required. If an application for a permit cannot be addressed with a Nationwide or District permit, then a detailed application must be submitted requesting an Individual Permit. A 30-day public review is required.
- District Permit - For activities authorized by the Corps of Engineers on a District basis. A 15-day public review is required. Examples of activities include minor excavations in wetlands and stream habitat improvement projects.
- Nationwide Permit - General permits that cover common design elements and/or construction activities. Specific requirements are attached to each Nationwide Permit. If certain conditions are met, the specified activities can take place without the need for an Individual or District permit. Each Nationwide Permit contains a description of the permit and may include the size of the area that can be impacted, the quantity of allowable fill, and other relevant information. A written pre-discharge notification of the Corps of Engineers may be required before work can begin.

For all these permits, it is important that the Project Manager provide the required information in a timely manner to facilitate the approval process. The Environmental Assessment or Environmental Impact Statement prepared for the project should identify by alternative the general location of each dredge or fill activity, and determine the impacts and proposed mitigation measures. Construction cannot start without a signed Section 404 Permit. The Section 404

Permit is a legally binding agreement between DDOT and the U.S. Army Corps. This means that changes in design or changes made in the field that alter impacts cannot be made until all parties have agreed to the changes and those changes have been documented.

4.9 Wetlands

A wetland finding must be prepared to determine the impacts and mitigate effects to wetlands caused by proposed DDOT transportation construction projects and maintenance activities. Wetlands are areas inundated or saturated by surface or groundwater, and under normal circumstances support a prevalence of vegetation typically adapted for life in saturated soil. Wetlands generally include swamps, marshes, bogs and similar areas.

A formal wetland finding is required for all transportation projects that involve construction in wetlands to determine how the project will affect the stability and quality of the wetlands. This evaluation should consider the short and long-term effects on losses such as flood control capacity, erosion control potential, water pollution capacity, and wildlife habitat values (mitigation requirements are often developed through Section 404 permits, named after Section 404 of the Federal Clean Water Act - these permits are issued by the U.S. Army Corps of Engineers:

U.S. Army Corps of Engineers
Baltimore District
Attention: CENAB-OP-R
P.O. Box 1715
Baltimore, MD 21203-1715
Phone: 410-962-3670
FAX: 410-962-8024

www.usace.army.mil (From home page, go to "Services for the Public", then "Wetlands and Waterways Regulation & Permitting", then "Regulatory Permitting Offices", then "District Offices", then "Baltimore")

The Environmental Coordinator initially is responsible for scoping the presence of wetlands early in the project development process. The Project Manager is responsible for scheduling a wetland delineation and wetland finding with their own designated wetland person that can be either DDOT personnel or a consultant. The Project Manager is also responsible for coordination with the FHWA, the U.S. Fish and Wildlife Service, the Bureau of Land Management, and the Corps of Engineers.

The following elements are included in a Wetland Finding (the degree of detail may vary depending on the size and importance of the wetlands and the type of impacts):

- Type of wetland
- Primary functions of the wetlands, such as flood control, wildlife habitat, groundwater recharge and filtering
- The importance of the impacted wetland
- The severity and type of the impact
- Mitigation plan
- An explanation why there is no practical alternative to the proposed action.
- An explanation why the proposed action includes all practicable measures to avoid or minimize harm to wetlands.
- A concluding statement on why there is no practicable alternative per Executive Order 11990, 23 CFR Parts 771,23 CFR Part 777, and FHWA Technical Advisory T 6640.8A.
- The development of the measures proposed to mitigate wetland impacts should include:
  - An evaluation of the impacted wetlands considering its type, size, and function (e.g., flood control, wildlife habitat or erosion control) as well as the type and degree of impacts on the wetlands.
  - A mitigation plan that addresses specific impacts and utilizes avoidance, minimization, and compensation (the mitigation plan should be included in the bid plans).
  - Documentation there was consultation with appropriate Federal agencies.

For Major projects, the Wetland Finding is included in the Final Environmental Impact Statement, and for Intermediate projects, it is included in the Environmental Assessment. The Wetland Findings must be signed by the Environmental Programs office manager or the FHWA. Construction cannot start without a signed wetland finding.

Wetland findings are legally binding agreements between DDOT and FHWA. This means that changes in design or project changes made in the field that alter impacts cannot be made until all parties have agreed to the changes and those changes have been documented; for further information, see the Designer's Wetland Process Narrative.

4.10 U.S. Fish and Wildlife

The FHWA is primarily responsible for consulting with the U.S. Fisheries and Wildlife Division to determine the presence or absence of threatened or endangered species or their critical habitat. The Project Manager and/or consultant in the Office of Planning are authorized to act on behalf of FHWA and conduct informal consultations with the U.S. Fisheries and Wildlife Division and/or prepare biological assessments.

The consultant is responsible for obtaining information relating to sensitive species or critical habitat, using biological surveys, expert opinion, published reports, and available databases. The Project Manager and/or consultant are

responsible for notifying design engineers of potential problems and collaborate on mitigation measures.

If a project is determined to have "no effect," then the consultation is not recommended. However, it is recommended that a concurrence letter be obtained from the U.S. Fisheries and Wildlife Division. If a project is determined to have a "may effect" designation, the consultation process with the U.S. Fisheries and Wildlife Division is initiated. This process, generally known as Section 7 Consultation, may take the form of a formal consultation or conference, a biological assessment, or a combination of the above.

A biological assessment determines the effects a project will have on listed and proposed species and designated or proposed critical habitat. It also determines whether formal consultation or a conference with the U.S. Fisheries and Wildlife Division is necessary. The biological assessment is submitted to the U.S. Fisheries and Wildlife Division by the Project Manager or consulting Biologist. All of this information must be documented in the Environmental Assessment or Environmental Impact Statement prepared for the project.

4.11 Hazardous Waste and Materials/Contaminated Soils

The Project Manager is responsible for completing hazardous waste studies and for determining the potential for encountering hazardous waste on a DDOT project. Hazardous waste studies address the identification, evaluation, and mitigation of hazardous waste. Hazardous waste issues should be resolved prior to construction of the project, and prior to ROW acquisition.

An Environmental Site Assessment is prepared that includes conducting a records search and a visual inspection of the project area. The Environmental Site Assessment should be completed prior to the acquisition of any property. If the potential for hazardous waste is indicated from the Environmental Site Assessment, then a site investigation is initiated to determine the type and extent of the contamination. If the contaminated area can be avoided, a site investigation may be necessary. Early coordination with the District Office of the Environmental Protection Agency and the Department of Public Health will aid in identifying potential waste sites.

If contaminants are located on the property and it has been determined the property cannot be avoided (this decision is made in consultation with the District ROW unit and the FHWA), the Project Manager conducts further site investigation. The object of this further site investigation is to delineate the vertical and lateral extent of contamination on the site and to identify the type and concentrations of contaminants. This additional site investigation also provides recommendations for remedial actions. A Materials Management Plan is prepared that is used to establish site-specific-action levels for the management and

handling of contaminated soils or waters that may be encountered during construction.

Any mitigation recommendations, potential public health concerns, potential agency liabilities, and project alternatives must be discussed in the Environmental Assessment or Draft Environmental Impact Statement. The Finding of No Significant Impact or Final Environmental Impact Statement should resolve any issues raised by public and government agencies.

4.12 Noise Analysis

Projects that may require a noise analysis under FHWA regulations are denoted as either Type l or Type II. Type II Projects are proposed Federal-aid projects for noise abatement on an existing highway. Type II projects are not mandatory requirements according to FHWA guidelines. DDOT does not currently administer a Type II program.

For Type I Projects a noise analysis must be performed in accordance with the DDOT Noise Analysis and Abatement Guidelines for all project alternatives. In determining noise impacts, noise abatement will usually be effective only where noise sensitive activities occur and within 300 ft. of the centerline of the proposed project. For highways with a projected average daily traffic of 70,000 vehicles/day, the area is expanded to 500 ft. of the centerline.

A noise analysis document must be prepared for each project. The following steps are to be followed for all Type I and II projects:

- Identification of land uses and activities
- Determination of existing noise levels
- Prediction of future noise levels
- Determination of traffic noise impacts
- Identification of mitigation measures
- Determination if mitigation measures are feasible/reasonable
- Development of recommendations and completion of Noise Abatement Determination

For most cases, FHWA noise analysis guidelines are used. However, in the case of a project that contains rail (light rail, commuter rail, etc.) or certain types of fixed facilities (i.e., parking or terminal facilities), noise analysis in regards to those elements is covered under DDOT guidance.

The noise analysis must be addressed and summarized in the required environmental documents (Environmental Assessment/Environmental Impact Statement) for Major and Intermediate projects. Noise mitigation, if recommended, should be incorporated into and be an integral part of the project.

NOTE: It is impossible to review each project given, due to the fact that one staff person is assigned to environmental activities and approximately 150 projects must be provided with clearances annually.

4.13 Air Quality

The Air Quality Control Division within the Environmental Health Administration (EHA), Department Of Health (DOH), is responsible for coordinating projects. A discussion of the air quality impacts, including a summary of the hot-spot analysis (if required), must be included in the Environmental Assessment or Environmental Impact Statement for the project.

4.14 401 Water Quality Certification

A Section 401 Water Quality Certification is required in conjunction with an Individual 404 Permit (dredge and fill permit) for any transportation construction project or maintenance activity where work occurs below ordinary high-water line or adjacent to wetlands.

Section 401 requires an applicant to obtain certification for any activity on a project that may result in a discharge of any pollutants. The Project Manager is responsible for applying for a 401 Certification from the Department of Public Health. The Project Manager is also responsible for coordinating any questions or concerns between the two agencies.

The 401 Certification must be obtained from the Water Quality Control Division as prescribed in 401 Certification Regulation. A 401 Certification application should be initiated at least four to six months prior to construction. All information required by the 401-application, design information, and best management practices to be used on the project must be submitted to the Corps of Engineers, Water Quality Control.

If a 404 Nationwide or General permit has been issued, a 401 Certification is not required. If an Individual 404 Permit is needed, the Department of Public Health will notify the Project Manager of the need for 401 Certification.

The Environmental Assessment or Environmental Impact Statement should be used to review potential adverse impacts and identify proposed mitigation measures.

4.15 402 Permit

The Project Manager must compile the information on the project activity that requires the acquisition of the 402 Permit and the general project description as it relates to stream or wetland encroachment for the permit application. The Project Manager will also coordinate with the consulting Hydraulics Engineer.

The following activities will require the acquisition of a 402 Permit:

- Construction de-watering operations associated with activities such as utility excavation, bridge pier installation, foundation or trench digging, or other subsurface activities.
- If discharge is expected to occur from a point source discharge from mechanical wastewater treatment plants, vehicle washing, or industrial discharges.

Typically, the Project Manager will prepare a permit application and submit it to the Department of Public Health. In some cases, the Environmental Coordinator may prepare 402 Permit applications. The Environmental Coordinator is responsible for coordinating any questions or concerns between the two agencies.

A 402 Permit application should be initiated at least 30 days prior to construction. The need for a 402 Permit should be addressed and identified in the Environmental Assessment or the Draft Environmental Impact Statement prepared for the project. The environmental document should address the potential adverse affects caused by point source discharges.

The Final Environmental Impact Statement or the Finding of No Significant Impact should include every reasonable effort to resolve any issues raised by other agencies regarding 402 Permits. The Project Manager will also coordinate the Permits for Categorical Exclusion projects with all responsible offices.

4.16 NPDES Permit

The National Pollutant Discharge Elimination System program requires permits for the discharge of pollutants from any point source into waters of the United States. The following activities will necessitate a DDOT Discharge Permit System discharge permit:

- De-watering operations associated with construction
- Point source discharges from rest area wastewater treatment plants
- Vehicle washing
- Other regulated point source discharges

The Project Manager will provide this information and general project description, including commencement and termination dates, as it relates to stream or wetland encroachment to the Department of Health. He/she will also provide a permit application at 65% completion of design and incorporate all comments and requirements before final review submission.

The following activities will necessitate a DDOT Discharge Permit System storm water discharge permit:

- District highway system within municipalities with populations of 100,000 or more (50,000 after March 2003)
- Construction activities, except those that disturb less than five acres of total land area and are not part of a larger common plan (less than one acre after July 2003)

4.17 Erosion Control

Erosion and sedimentation control solutions may include, but are not limited to:

- Shield soil from rainfall and runoff -mulches, blankets, and nettings are available, also chemical soil binders
- Reduce soil exposure time between earthwork and slope re-vegetation
- Control runoff water - keep natural or clear water runoff separate from construction or project runoff
- Trap sediment - using silt fences, erosion bales, erosion logs, or sediment basins
- Revegetation with permanent or temporary seed mixes throughout construction

The Project Manager will provide a Storm Water Management Plan to the Department of Health with a permit application at 65% completion of design and incorporate all comments and requirements before final review submission.

The following erosion control measures and procedures required for construction (including sediment control) are:

- Show erosion control measures in the plans, specifications, and estimate
- Establish permanent erosion control practices at the earliest practicable time
- Coordinate temporary erosion control measures with permanent measures to assure an economical, effective and continuous control throughout construction
- Monitor, maintain, or revise erosion and sediment practices during construction of the project
- Not allow stockpiling or disposal of pollutants used during construction in or near any watercourse